

A Great Tunnel Enterprise for Tintic Mining District

By WILL C. HIGGINS

L. A. Martin and associates, of Salt Lake City, are actively engaged at the present time, in formulating and perfecting the details of an enterprise that is gigantic in its magnitude, and which should add many years to the life and productiveness of the mines of Tintic district, Utah, and, at the same time provide means for economical operation; to say nothing of the added revenues to be derived from milling operations, electric power plants and irrigation propositions.

doubt, could be made to produce many millions were they susceptible of economic operation to depths of 1,500 to 3,000 feet, as it has been demonstrated that their ore-zones extend below the water level with every indication that they will maintain their size and value to great depths.

For years it has been the dream of Tintic mining operators to secure drainage for their holdings at depth, to say nothing of transportation facilities that would obviate expensive hoisting, and an outlet for the

district, and this is especially true where deep mining in the district is concerned.

The Proposition.

When rounded into shape the enterprise in question will be known as the Tintic Tunnel Company.

This company, according to preliminary plans, proposes to start a large drain and transportation tunnel near the head of Goshen valley on the 5,000-foot contour line, and drive it due west under the great



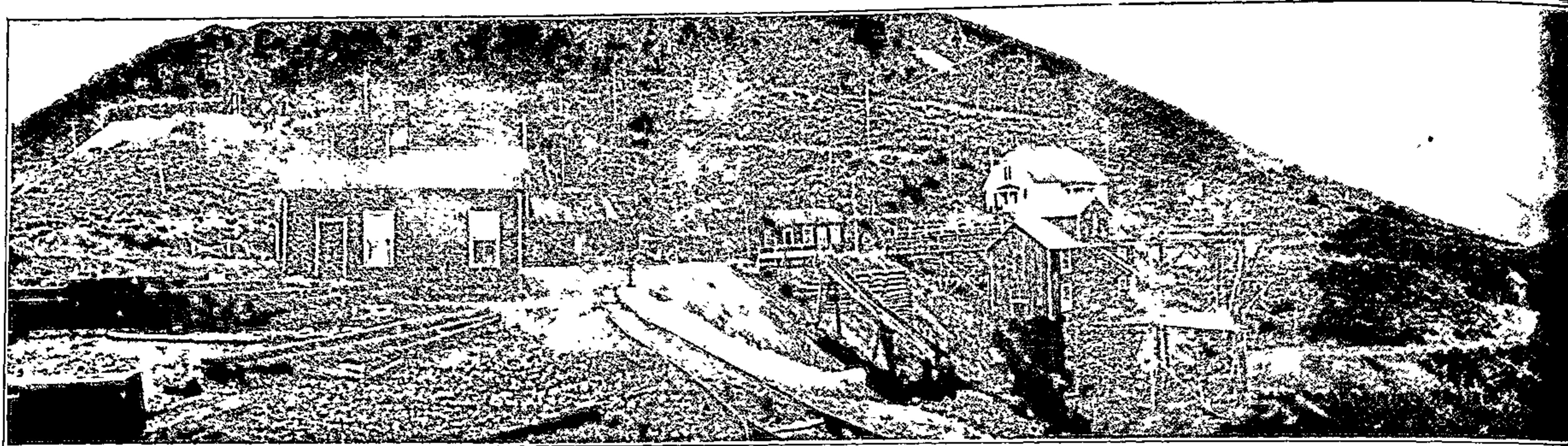
The Dragon Mine, Elevation, 6,600 Feet. Depth at Which It Will Be Cut by Tintic Tunnel, 1,600 Feet. (Photo by Will C. Higgins)

In Tintic district the deepest mines have encountered water troubles which have very materially handicapped mining operations while, in the southern portion of the district, in the Silver City and Diamond sections, nearly every active and producing property has been obliged to abandon development and ore-production upon attaining a depth of from three to five hundred feet, owing to the great volumes of water with which their owners have had to contend, and these properties, without a question of

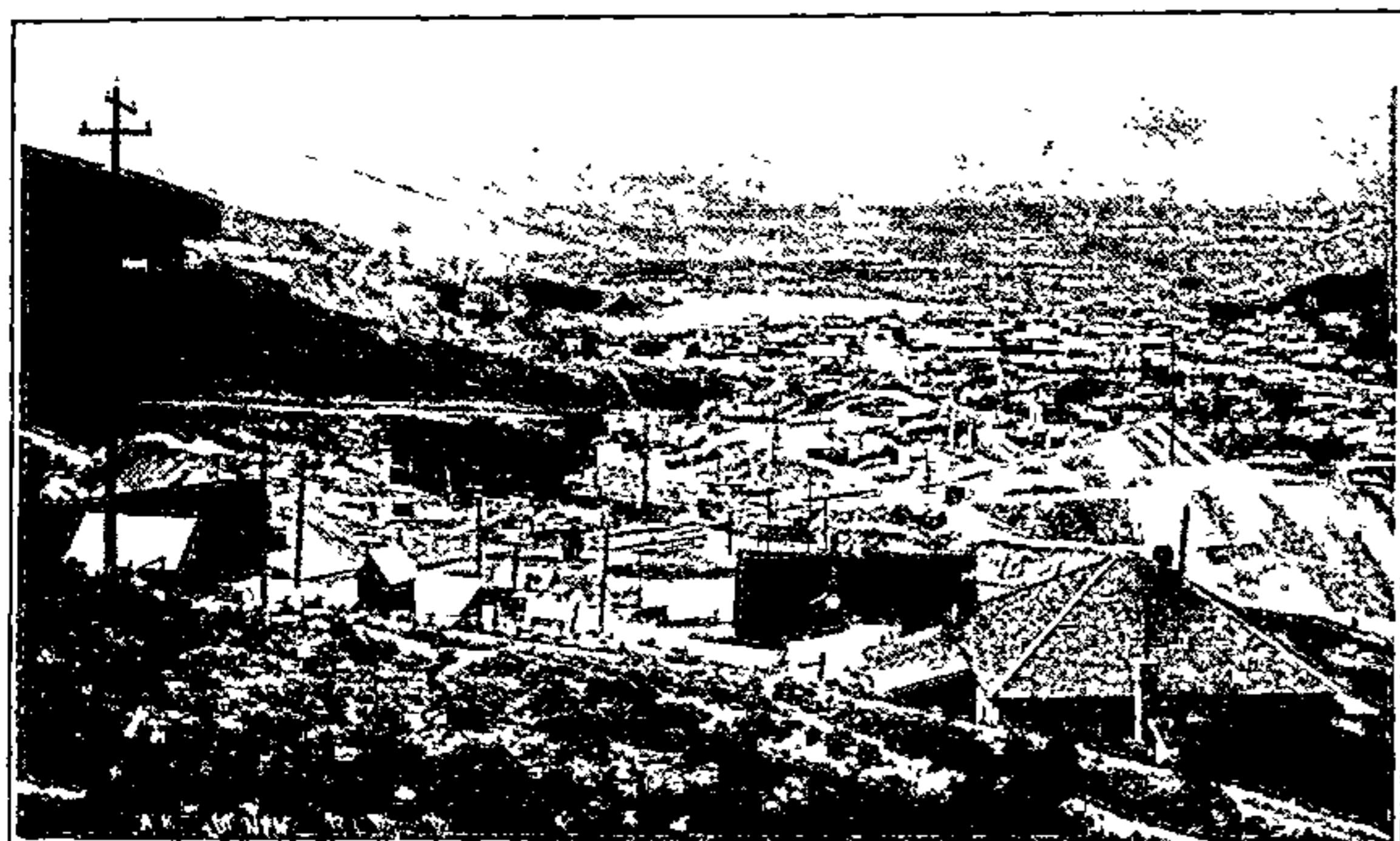
production of their mines at a point where reduction works could be erected with every convenience obtainable, such as an abundance of water, desirable railroad facilities and short hauls to smelters and mills.

With all of these advantages in view Mr. Martin and his colleagues have prepared and presented a plan that is meeting with great favor with the mining men of Tintic district, and which promises to solve a knotty problem that has long confronted successful mining operations in Tintic dis-

ledges and mines of Tintic district. These veins, as is well known, and there are a number of them which practically parallel each other, have a strike northerly and southerly so that the tunnel will cut the system at right angles. The tunnel will start near a point located at 39 degrees, 55 seconds, north latitude, and at longitude about 112 degrees, in Utah county, township 10 south, range 2 west, on the east side of Tintic district, and almost on a water grade with Salt Lake City.



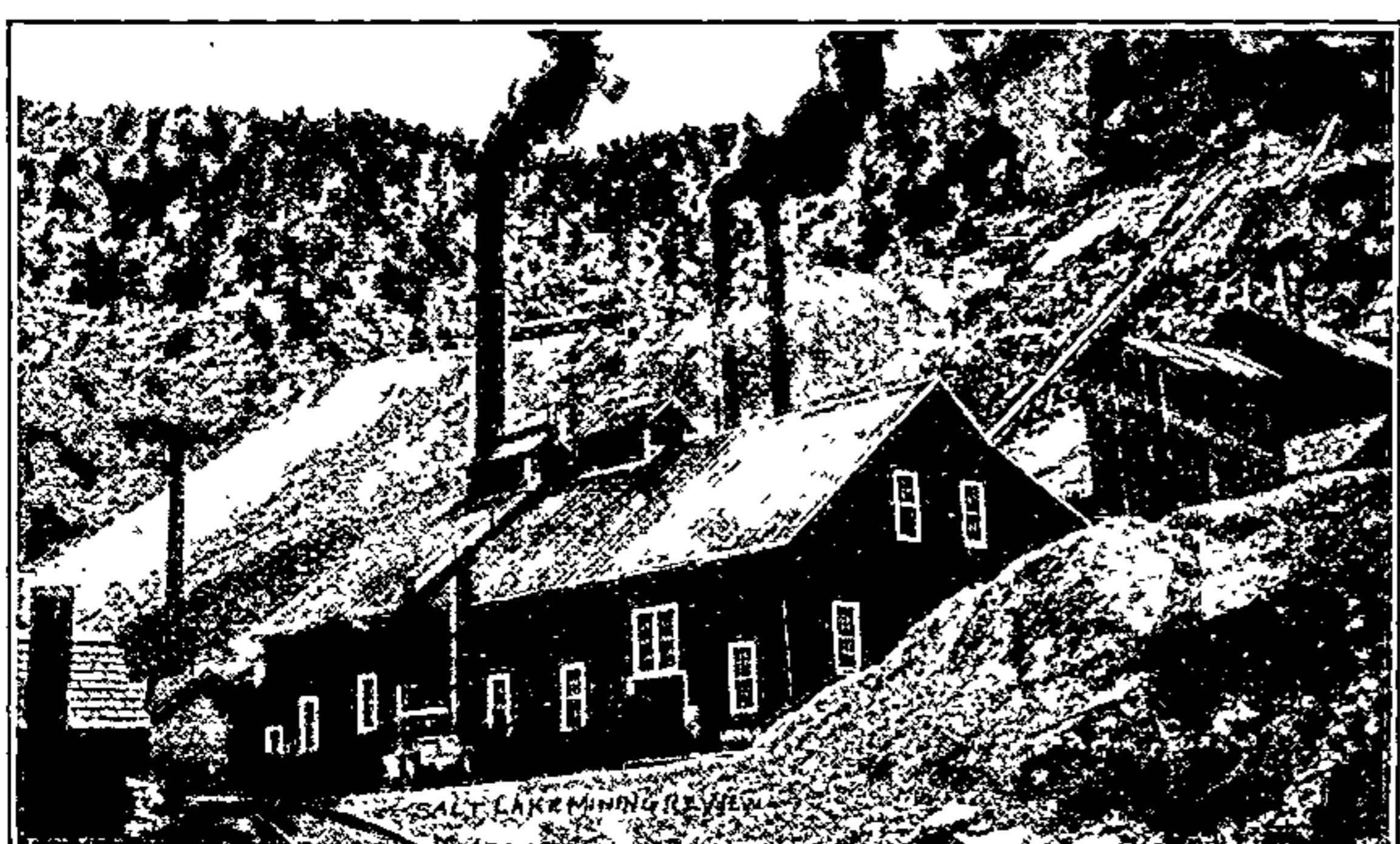
The Yankee Consolidated Mining Company



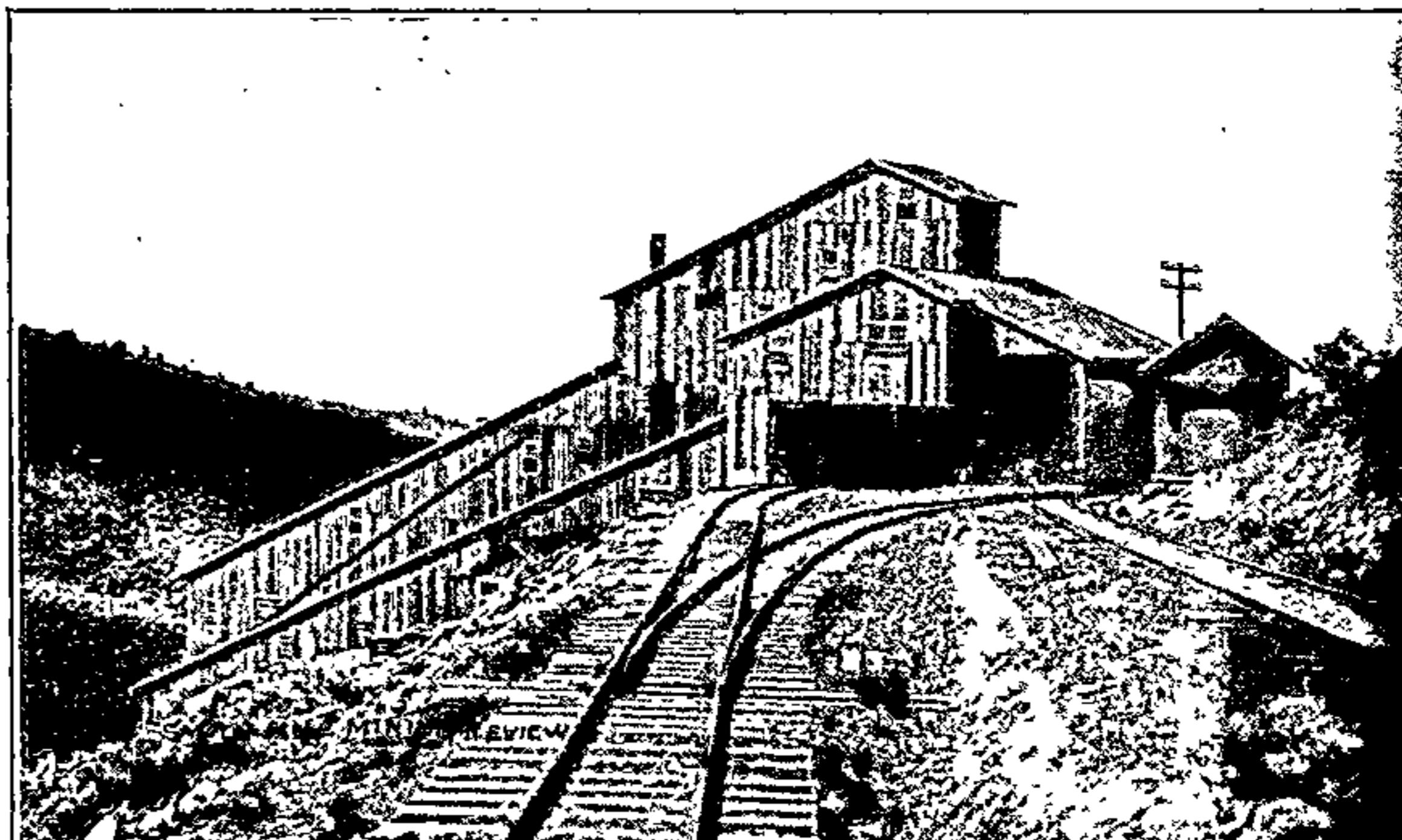
The Lower Mammoth



The Victoria Mine



The Mammoth Mine



Knight-Christensen Mill



Godiva, May Day and Uncle Sam Mines

Some of the properties which would be benefited by the long tunnel of the Tintic Tunnel Co.

(Photos by Will C. Higgins)

Results Obtained.

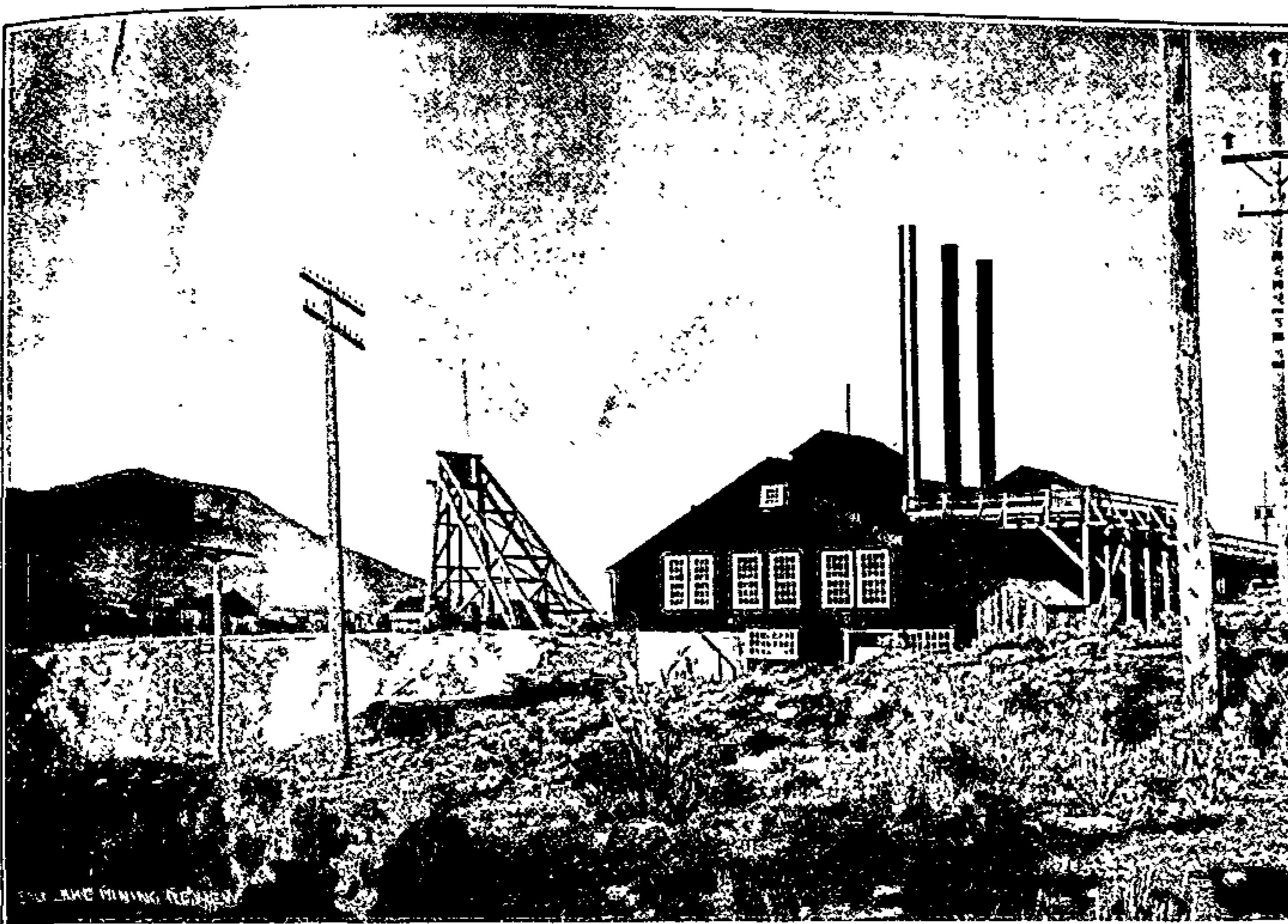
By running this tunnel through the range and through and under the igneous formations of Tintic the mines of the district would be drained to great depth, and the

the tunnel will be used for transportation purposes, and all companies and owners of mines, after having made underground connections with the tunnel, will be given transportation facilities, so that their ores

process of organization, and it is announced that the directorate will consist of some of the most prominent and active mining men in Utah, whose names will be announced within a few days. Reports are being prepared by some of the most competent and well-known engineers in the west, and these will be ready to submit to the public in the near future. The financing of this attractive enterprise will be accomplished by the sale of bonds and stock.

Some of the Mines to be Benefited.

There are hundreds of properties in Tintic district which will be directly and indirectly benefited by the driving of this long tunnel, and these might be divided into two classes: Those already suffering and handicapped by the presence of water in their workings, and those whose development is held in abeyance because of the known fact that, when depth is attained, operations must be checked or entirely suspended because of this great obstacle to successful and economic continuation. Many of the mines of the district, heavy producers and regular dividend-payers at the present time, are still working "dry," but the day is not far distant when they, also, must become confronted with the water problem. To all such the knowledge that the tunnel will have eliminated this obstacle when they shall have reached water level, will be an encouragement to proceed without fear or apprehension. There are others, too, which will be vastly benefited, and these are the mine owners who have not thoroughly pros-



Chief Consolidated Shaft at Eureka

water drawn from the veins and fissures would be worth many thousands to farming lands in the valley, thus securing two blessings by eliminating the constant menace to the one and by giving to the other the moisture needed for the successful growing of crops.

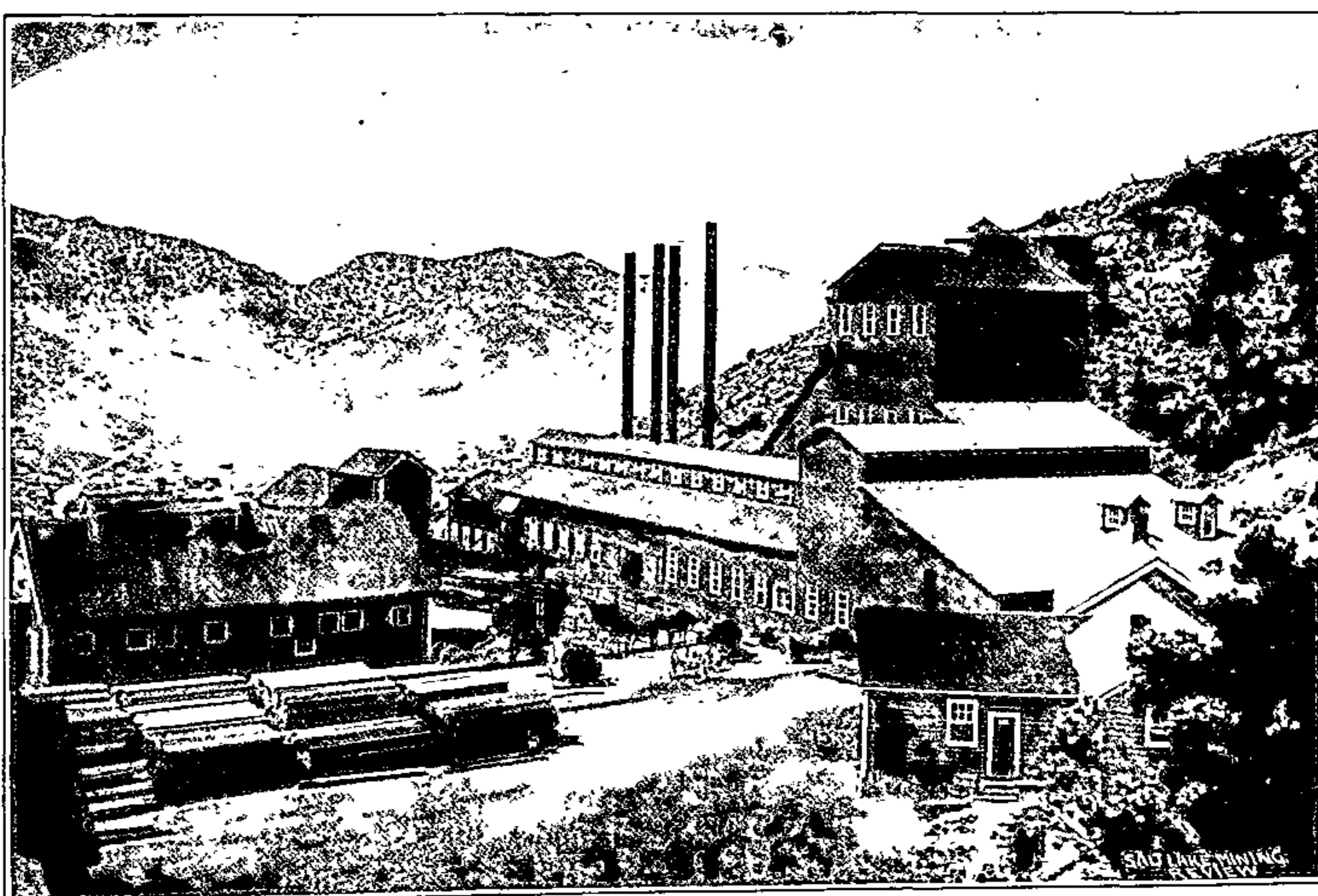
Facts About the Tunnel.

This giant tunnel, when completed, will be about five miles in length. It will probably cut under Treasure Hill in the Silver City portion of Tintic district, and unwater many mines in that locality that are known to possess great deposits of payable ore, but which cannot be successfully and profitably worked to only shallow depths on account of the excessive flow of underground waters; such, for instance, as the old Swansea, the South Swansea, the Laclede, the Montana, Sunbeam, United Tintic, and others, while it will also unwater the mines in the northern portion of the district which have sunk to the water level.

The tunnel will be equipped with double track, and the ore and waste-bearing cars will be electrically operated, while the waterway, or ditch on one side or in the middle of the big bore will have a capacity of 75 to 100 second feet per minute. The grade of the tunnel will be from ten to twenty feet per mile. To complete the tunnel will cost in the neighborhood of \$1,000,000.

Besides accomplishing the primary object of draining the mines of the district,

and waste can be delivered at the tunnel's portal at a trifling cost; the ore to be treated in reduction works to be established at or near the outside terminal, or shipped



Centennial Eureka Mine, at Eureka

direct to nearby smelters; thus doing away with the heavy expense of hoisting from deep levels and other costs connected with surface mining operations at high altitudes.

The Tintic Tunnel Company is now in

pected their holdings on the surface but who, with the tunnel running near or through their ground, could run laterals from it either for the accomplishment of development operations or the performance

of annual assessment work. This latter class could then do away with the necessity and expense of surface buildings and equipment, and, if successful in uncovering deposits of the precious and baser metals, would find an easy and economical outlet for their mine products.

With the tunnel in commission climatic conditions could also be practically eliminated by operating through the big bore. It would not be necessary for the miner to "buck" heavy snow and face zero weather, in the winter time, in going to and from work if mining from the tunnel level; and this method of operation would also have many advantages in its favor, including a material reduction of expense.

Some idea of the sweeping benefits which will follow in the wake of the completion of this deep drainage tunnel, and how it will affect a large number of the mines of Tintic district can be gained by a glance over the following table, which shows their elevation and the depths to which they can be drained:

Properties Affected.

Name of mine or place.	*Elevation.	**Depth.
Alaska	6,649	1,649
Bullock	6,500	1,500
Chief Consolidated	6,500	1,600
Colorado	7,300	2,300
Cornucopia	6,500	1,500
Dragon	6,600	1,600
Diamond	6,250	1,250
Diamond Divide	6,790	1,790
Eagle & Blue Bell	6,600	1,700
Eureka Peak	7,909	2,909
Emerald	6,830	1,830
Four Aces	6,140	1,140
Governor	7,000	2,000
Godiva shaft	7,000	2,000
Gemini	6,467	1,467
Humbug	7,400	2,400
Iron Duke	6,300	1,300
Iron Blossom No. 1	7,250	2,250
Iron Blossom No. 2	7,300	2,300
Joe Bowers	6,500	1,500
Knightsville	6,500	1,500
Keystone	6,500	1,500
Lucky Boy	6,400	1,400
Laclede	6,500	1,500
Martha Washington	6,750	1,750
Mammoth Peak	8,104	3,104
Mammoth	841	1,841
Ophongo	7,300	2,300
Opex	6,655	1,655
Primrose	6,350	1,350
Rabbit's Foot	6,300	1,300
Swansea	6,100	1,100
Sunbeam	6,532	1,532
Silver City	6,150	1,150
Silver Pass	6,684	1,684
Sioux Peak	8,094	3,094
Sioux-Ajax tunnel	6,806	1,806
Spy	7,400	2,400
Sioux Consolidated	7,300	2,300

Triumph	6,400	1,400
Treasure Hill	6,852	1,852
Tesora	6,500	1,500
Undine	6,495	1,495
Uncle Sam	7,100	2,100
United Tintic No. 1	6,500	1,500
United Tintic No. 2	6,750	1,750
United Sunbeam	6,500	1,500
Yankee Girl	6,200	1,200

*Elevation of mine above sea level.

**Depth gained by tunnel, not allowing for grade.

Tunnel Right to Veins.

Another feature of importance and of possible benefit to the promoters of this enterprise is the possibility of the finding of underground or blind veins of the precious or semi-precious metals, the discovery of which, under certain conditions, would invest title in the tunnel company. In anticipation of such discovery provision is made in section 4 of the Act of 1872, Revised Statutes, section 2323, which says.

plied to the irrigation of land, will give the company an earning capacity equal to that to be obtained by the draining of the mines in its course or the revenue to be gained because of its transportation facilities. On the east side of Tintic range, below the mouth of the tunnel, there are tens of thousands of acres of rich land which only need water for their transformation into fruitful and valuable farms; and, this great area of virgin soil could successfully be reclaimed and cultivated by using the water flowing from the big bore. As a matter of fact, preliminary estimates indicate that the value of the water will fully compensate for the driving of the tunnel, while the ore extracted and marketed from the company's own mining property, on the line of the tunnel, and the revenue to be derived from transportation receipts, would be practically clear gain.

It is estimated that between fifty and 100 square miles of mineral land will be drain-



Colorado Shaft No. 2. Should be Benefited by Tintic Tunnel

"Where a tunnel is run for the development of a vein or lode, or for the discovery of mines, the owners of such tunnel shall have the right of possession of all veins or lodes within 3,000 feet from the face (mouth) of such tunnel on the line thereof, not previously known to exist, discovered in such tunnel, to the same extent as if discovered from the surface; and the locations on the line of such veins, or lodes, not appearing on the surface, made by other parties after the commencement of the tunnel, and while the same is being prosecuted with reasonable diligence, shall be invalid; but a failure to prosecute the work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins on the line of the tunnel."

Irrigation Features.

It is estimated that the flow of water derived from the driving of the tunnel, and ap-

ed by the tunnel and, when the project has reached completion and fulfillment, an outlet and transportation will be afforded for millions of tons of lowgrade ore as well as the normal output of shipping ore. A feature of the proposition is the building of a custom mill near the mouth of the tunnel, which is located within a short distance from a high-power electric line, and from the Tintic branch of the Denver & Rio Grande railroad.